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<input type="checkbox"/>	L37	L36 and (mobile or phone or cell or wireless)	21
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<input type="checkbox"/>	L35	L33 and l31	0
<input type="checkbox"/>	L34	L33 and l16	0
<input type="checkbox"/>	L33	L32 and @AD<19990211	96
<input type="checkbox"/>	L32	unified messaging	1051
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<input type="checkbox"/>	L29	L28 and @AD<19990211	4
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<input type="checkbox"/>	L27	L26 and @AD<19990211	31
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<input type="checkbox"/>	L17	L16 and @AD<19990211	545
<input type="checkbox"/>	L16	(message type module) or MTM	1607
<input type="checkbox"/>	L15	L14 and l1	9
<input type="checkbox"/>	L14	L13 and @AD<19990211	15
<input type="checkbox"/>	L13	L12 and (send as)	19
<input type="checkbox"/>	L12	message near8 (convert or conversion or converting) near8 (protocol or format)	4677
<input type="checkbox"/>	L11	L8 and l1	3
<input type="checkbox"/>	L10	L8 and l3	0
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<input type="checkbox"/>	L5	message near attribute	1306
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<input type="checkbox"/>	L3	L2 and @AD<19990211	32
<input type="checkbox"/>	L2	((single or universal) adj (message or messaging)) adj (system or application)	87
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L37: Entry 1 of 21

File: PGPB

Dec 13, 2001

DOCUMENT-IDENTIFIER: US 20010050978 A1  
TITLE: GENERIC DISTRIBUTED MESSAGE BOX

Application Filing Date:  
19980624

Summary of Invention Paragraph:

[0004] A personal message box (e.g., for storing voice mail messages, facsimile messages, e-mail or other text messages, multimedia, etc.) is presently a common and valued service offered by communication network operators as a complement to ordinary voice services and other real-time services. As such, the format of a stored message can vary and comprise, for example, textual, verbal or visual information. Accordingly, many mobile phone users appreciate an opportunity to be able to convert a message to a different format than what was originally stored.

Summary of Invention Paragraph:

[0005] Certain communication systems are now capable of rerouting an unanswered telephone call to a service node that includes a voice message box. For example, certain telecommunications networks called Intelligent Networks (INs) provide relatively new communication capabilities and services that make it possible for subscribers to have their own personal mailboxes. These mailboxes can store messages having various formats including, for example, voice messages, facsimile messages, and e-mail. These INs typically include functions for converting from one message format to another.

Summary of Invention Paragraph:

[0006] A type of personal message box now available for use in cellular communication networks is the textual Short Message Service (SMS) provided in the Global System for Mobile Communications (GSM). On the computer network side, personal message boxes are typically associated with unique entries to databases, which are capable of storing data in various formats such as voice, text or graphics.

Summary of Invention Paragraph:

[0007] Methods currently exist for converting a message from one format to another, such as, for example, a format that is more suitable for a user at a particular point in time. Such conversion methods can be used in services that allow a user enough flexibility to select an appropriate terminal to read a stored message, once the user has been notified about its registration in a mailbox.

Summary of Invention Paragraph:

[0008] PCT Application No. WO-9620553, titled "Unified Messaging and Long Distance Communication System," discloses a method for integrating a public network and a data network in order to transfer messages from a sender to a receiver's mailbox. The receiver can then be notified about a new message. Also, a method is disclosed for converting the format of a message, in order to reroute it to a selected terminal.

Detail Description Paragraph:

[0029] FIG. 1 is a simplified block diagram that illustrates an exemplary system and method for arranging message boxes for use by a plurality of telecommunications networks, in accordance with a preferred embodiment of the present invention. Exemplary system 100 includes a Personal Assistant (PA) 101, which can be, for example, a service computer or a server. For this embodiment, incoming calls made to a personal number are redirected to a network node. PA 101 functions primarily to maintain control over further processing of calls in order to effect storage of a message in a selected message box. The same personal number can be used in any one of a plurality of telecommunications networks (e.g., networks 103, 104), which can redirect an incoming call to a final destination box utilizing respective network (e.g., switching) nodes 106 and/or 115. For messages arriving via other networks (e.g., Internet), a corresponding network address is used to indicate a receiver (e.g., an Internet Mail address). For example, telecommunications networks 103, 104 can be Public Land Mobile Networks (PLMNs), or one or both of networks 103, 104 can be an IN, Public Data Network (PDN), or Public Switched Telephone Network (PSTN).

Detail Description Paragraph:

[0036] The addressed party (intended recipient) can be notified about a new (stored) message in a number of ways, such as, for example, by using a paging system. The page message can include the telephone number of the PA 101. As such, once informed by the page, the intended recipient of the message can call the PA 101 via any of the plurality of networks 202, 205 (or, for example, networks 103, 104, 105), in order to read out or listen to the message. Since the message can be stored in one format and requested for reading (or listening) in a second format, a conversion function (not shown) is provided in the private network 208 (and/or public network) to convert the message from the one format to the other. As such, since the dialogue server 108 in FIG. 1 also includes a message format conversion function, access to the dialogue server 108 can be made from any one of the networks 202, 205, etc.

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L37: Entry 5 of 21

File: USPT

Oct 8, 2002

DOCUMENT-IDENTIFIER: US 6463462 B1

TITLE: Automated system and method for delivery of messages and processing of message responses

Application Filing Date (1):  
19990202

Brief Summary Text (5):

Commercially available unified messaging systems generally replace older communications technology with integrated voice and messaging systems for receipt of communications. Receipt of voice messages in a unified messaging system includes wave file recordings that are accessed by the recipient from an e-mail format.

Brief Summary Text (7):

The prior art methods implemented in commercially available unified messaging and device specific systems generally provide one-way delivery, with destinations defined by the sender. Unfortunately, prior art systems do not solve the need for originating a message, with attachment and response requirements, in a manner and format that is independent of the type of the device that is to be used for delivering the message to the recipients. Also, prior art systems do not permit the message notification methods to be defined by the recipients, and do not include a facility for automatic processing and organization of message responses. Accordingly, the e-mail, unified messaging and specific device systems using these prior art methods are deficient in responding to these requirements.

Drawing Description Text (6):

FIG. 5 is a block diagram overview of the flow of information through the Messaging Device Manager module used to convert the message into the proper communications format for receipt and response by recipient messaging devices.

Detailed Description Text (6):

Generally, the flow of device independent messages is initiated in digital format, either manually by Message Author 2 or triggered automatically by some external event. Recipients are selected, message and response fields entered, and attachments are selected at this point. The Profile Manager 4 provides the recipient with tools to define their preferred method, time, priority and security of message delivery, and stores this information in a client profile in UN Database 8. The Server Notification module 3 creates required system folders for processing and interaction with Messaging Device Manager 5 and Response Monitor 6. The Messaging Device Manager 5 converts the message information received from the UN Client into the proper format for receipt and response by a recipient. The format used by the Messaging Device Manager 5 corresponds to the messaging device(s) selected by the recipients and stored in their respective client profiles. These messaging devices and communications formats will include e-mail, voicemail, fax, pager, telephone and wireless messaging devices. The same information can be simultaneously delivered to recipients over the Internet and via PSTN through various third-party telecommunications gateways.

Detailed Description Text (15):

FIG. 4 is a flowchart showing the basic functionality of the Profile Manager 4 routines used for developing and maintaining recipient profiles according to the present invention. The user defines message delivery methods according to the message priority, device security and time schedule. Block 148 is the starting point where the user selects "profile manager" to begin the Profile Manager 4 process. The user enters name, UN identification and PIN 150, where checking 152 against UN Database 8 occurs and access 154 is granted. A profile management menu 156 is then presented to the user for selection 158 of device manager 160; profile manager 162 or schedule manager 164. Upon selection of device manager 160, the user chooses 166 to add and configure new devices 168 for receipt of messaging information sent by the system 10. These include multiple e-mail, voicemail, fax, pager, telephone and wireless communication devices. The user also selects which devices are secure for sensitive or confidential information receipt. Changes to existing devices 170 can also be made for reconfiguration requirements, and all current device parameters are stored in the UN Database 8. Upon selection of profile manager 162, the user chooses 172 to create a profile 174 for each priority and adds communications devices previously selected. The profile designates locations such as work, home, vacation, travel office, travel accommodations and other user preferences. Priority levels are selected based on the importance of communications information to be received. Changes to existing profiles 176 can also be made, and all current profiles are stored in the UN Database 8.

Detailed Description Text (18):

FIG. 5 presents an overview of the flow of information through the Messaging Device Manager 5 used to convert messages into the proper communications format for receipt and response by the recipients messaging devices according to the present invention. Messages from Message Author 2 flow into the Messaging Device Manager 5 where they are sorted into media folders for fax 186, voice 188 and pager 190 formatting. The media folders process the appropriate communications through the media translator 192, creating new message formats and addresses based on the recipient information received and messaging devices to which the messages are destined. The Messaging Device Manager 5 then sends the new messages out to the recipients messaging devices through the media router 194 which delivers translated information simultaneously over the Internet and PSTN through various conventional third-party telecommunication gateways. E-mail messages are sent directly to recipient e-mail devices through the Internet. Recipient responses are received and processed by the UN Server Notification module as shown in FIG. 3.

Detailed Description Text (31):

The Messaging Device Manager 5 is a separate module that interacts with gateways. The interface to standard gateways (e.g., pager, phone, and fax) is an e-mail message with a specially formatted address that indicates for which gateway it is destined. However, each gateway requires a slightly different message format. The Messaging Device Manager 5 performs the necessary conversions automatically.

Detailed Description Text (34):

As seen in FIGS. 14, 20, 21, and 22, a recipient sets up his or her recipient profile by making selections from three primary categories: devices, profiles, and schedules. As seen best in FIG. 20, a recipient first selects the "devices" tab and chooses one or more messaging devices that are to be used for delivering messages to that recipient. A check box indicates whether or not that selected device is capable of receiving secure (e.g., encrypted) messages. Information about that device, e.g., a phone number for a work phone, is entered. The recipient then selects the "profile" tab so that profile details corresponding to each selected messaging device can be entered. For example, the recipient will determine whether a particular messaging device is to be used for secure messages or not and which messaging devices will correspond to the three levels of message importance. Finally, the recipient selects the "schedules" tab so that the recipient can assign the various profiles to dates and times. For example, at certain times of the day or on certain days of the week, the recipient may wish to receive messages of

normal importance at work only. However, if the message is of high importance, then that recipient may wish to receive the message at home or at work.

Detailed Description Text (40):

When implemented as shown above, selecting "UN" in Outlook 2000 starts the loop with messaging and notification modes. Messages can be sent in low, normal or high importance modes. The UN Client makes faxing, paging and voice communications from e-mail easy to use by shielding the user from the details of each recipient's devices and work schedule. As seen on FIG. 13, the user is presented with a standard universal message form. He/she then selects recipients from the global address list, adds fields if desired, fills out the message form, and sends the message. The message form displays the quantity and type of devices to receive messages, as obtained from the various collective recipient profiles. Ad hoc additions to the global address list and associated messaging device information are available for real-time profile additions by the user. Once the message is sent, the UN Server provides text-to-speech conversion and voice mail navigation for phone and voice mail recipients, and manages message notification for all messaging devices indicated in conjunction with Microsoft Exchange Server.

Detailed Description Text (44):

Receipt of a system message is formatted for specific devices (i.e. e-mail, pager, fax, phone) defined in a recipient's profile. Text-to-speech is provided for phone receipt, and voice mail navigation is accomplished through the UN Server software. Any recipients of system messages that are not profiled will receive e-mail by default, with a reminder to set up their profile to take full advantage of the communications, scheduling and priority extensions to enhance their business productivity. A recipient may respond to the system message through the most convenient device available to him at the time and is prompted to supply information requested by the sender for proactive closure. The recipient's response back to the sender can be initiated by e-mail; phone or Web activated devices.

Detailed Description Text (51):

The routines and steps described above are easily implemented using standard programming tools, libraries and techniques, such as Visual Basic and Microsoft Windows Speech Applications Programming Interface (SAPI). A number of conventional messaging device servers and interfaces can be used with the system, including: Fax SR from OmTool, Harmony from OpenPort Technologies, or RightFax from Applied VoiceTechnology for fax services; and Mobile Connector from Fenestrae, or TAP interface (alternatively known as PET or IXO) as defined by Personal Communications Industry Association for pager services. Interactive voice server technology, including a voice server, text to speech library, and voice mail navigation system is available from Dialogic Communications Corporation, Franklin, Tenn.

CLAIMS:

1. A system for sending messages to messaging devices used by recipients and for processing message responses from the recipients comprising: a. a message client comprising a message authoring module to allow a user to generate message content and message information using a universal message form, the message authoring module including means to embed a response field in the message form so that message recipients can add message responses to the form; b. the message client further including a recipient profile module, to allow each recipient to create a recipient profile corresponding to that recipient, the recipient profiles including profile data selected by each recipient that define message delivery devices and message delivery methods for messages directed to that recipient, according to messaging rules created by the recipients that include message priority, messaging device security, and time; c. a message server operatively connected to the message client for receiving the message information from the message authoring module and including a translator for automatically converting the message form and message content into one or more message formats usable by the messaging devices selected

by the recipients in their corresponding recipient profiles; d. the message server further including a messaging device manager for automatically routing the messages to at least one of the messaging devices selected by the recipients in their recipient profiles in accordance with the messaging rules created by each recipient and a response monitor module for receiving and automatically processing the message responses from the recipients into message response information; e. a system database for storing the recipient profiles, messages, and message response information, the message response information including identification of the recipients, status of message delivery, substance of responses to questions imbedded in the response field imbedded in the message form, identification of the messaging device(s) used to deliver the message, and time of response; and f. a response viewer module for allowing the user to view the message response information, including a compilation of the message responses added to the response fields in the message form by the recipients.

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L37: Entry 6 of 21

File: USPT

Aug 6, 2002

DOCUMENT-IDENTIFIER: US 6430177 B1

TITLE: UNIVERSAL MESSAGING SYSTEM PROVIDING INTEGRATED VOICE, DATA AND FAX MESSAGING SERVICES TO PC/WEB-BASED CLIENTS, INCLUDING A CONTENT MANAGER FOR RECEIVING INFORMATION FROM CONTENT PROVIDERS AND FORMATTING THE SAME INTO MULTIMEDIA CONTAINERS FOR DISTRIBUTION TO WEB-BASED CLIENTS

Application Filing Date (1):  
19980609

Brief Summary Text (4):

Universal Messaging enables subscribers to realize the benefits of unified messaging, which consolidates the notification, presentation and management of voice, fax and e-mail messages. With Universal Messaging, a subscriber need only check a single notification device for new messages. Such notification may be provided, e.g., by an e-mail message, message waiting indicator light, stutter dial tone, pager and/or an automatic outdial phone call.

Drawing Description Text (6):

FIG. 5 illustrates how the different components of the inventive Universal Messaging system use standard interfaces and protocols to provide unified messaging services.

Detailed Description Text (21):

Converting message-based Web extension calls to procedural CMC calls and UM service library calls, and converting any responses to these calls to a response message format; and

Detailed Description Text (220):

The "open architecture" of the presently preferred embodiment is illustrated in FIG. 5. In particular, FIG. 5 illustrates how the different components of the inventive Universal Messaging system use standard interfaces and protocols to provide unified messaging services.

Detailed Description Text (222):

The preferred embodiment of the present invention is a carrier-grade system based on components that are known for their reliability, availability, and openness. The Messaging Platform 10 is based on proven technology, the same solutions at work in voice and fax messaging deployments around the world. The Web Platform 12 is based on commodity products such as Windows NT and Java. In addition, the subscriber does not have to go through a laborious installation process in order to use Universal Messaging--all that is needed is a touch-tone phone and a Java-enabled browser with which to connect to the World Wide Web, both of which are well known. Even the NAP Web Plug-In, used to access voice and fax messages, is automatically downloaded and installed the first time a subscriber accesses his or her account.

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L37: Entry 7 of 21

File: USPT

Jun 25, 2002

DOCUMENT-IDENTIFIER: US 6411685 B1

TITLE: System and method for providing unified messaging to a user with a thin web browser

Abstract Text (1):

A unified messaging system: A server node with a telephony interface to interface with the public switch telephone network and a web interface providing an interface to a wide area network receives messages of a plurality of type via these interfaces. The messages are stored in a database and provided by the server node to a user node executing a web browser. The server node provides message conversion so that a user at the user node can retrieve messages of the different media types, respond to those messages, forward messages, and send messages of different message types across a plurality of media originating from the user node over the wide area network.

Application Filing Date (1):

19990129

Parent Case Paragraph Table (1):

U.S. Application Filing No. Date Title 09/239,560 1/29/99 INTEGRATED MESSAGE STORAGE AND RETRIEVAL SYSTEM DISTRIBUTED OVER A LARGE GEOGRAPHICAL AREA 09/239,585 1/29/99 CENTRALIZED COMMUNICATION CONTROL CENTER FOR VISUALLY AND AUDIBLY UPDATING COMMUNICATION OPTIONS ASSOCIATED WITH COMMUNICATION SERVICES OF A UNIFIED MESSAGING SYSTEM AND METHODS THEREFOR 09/239,584 1/29/99 COMPUTER-IMPLEMENTED CALL FORWARDING OPTIONS AND METHODS THEREFOR IN A UNIFIED MESSAGING SYSTEM 09/240,893 1/29/99 INTERACTIVE BILLING SYSTEM UTILIZING A THIN WEB CLIENT INTERFACE 09/240,368 1/29/99 SYSTEM AND METHOD TO MANAGE PHONE SOURCED MESSAGES USING A USER MODIFIABLE FIELD ASSOCIATED WITH THE MESSAGE 09/240,434 1/29/99 METHOD AND APPARATUS FOR NETWORK INDEPENDENT INITIATION OF TELEPHONY 09/240,435 1/29/99 APPARATUS AND METHOD FOR DEVICE INDEPENDENT MESSAGING NOTIFICATION 09/240,436 1/29/99 APPARATUS AND METHOD FOR CHANNEL-TRANSPARENT MULTIMEDIA BROADCAST MESSAGING 09/239,589 1/29/99 VOICE ACCESS THROUGH A DATA- CENTRIC NETWORK TO AN INTEGRATED MESSAGE STORAGE AND RETRIEVAL SYSTEM

Brief Summary Text (3):

The invention relates to a unified messaging system. More specifically, the invention relates to a system which permits a user to review, respond to, or forward multiple media message types from a user node, executing a thin web browser.

Brief Summary Text (8):

A unified messaging system is disclosed. A server node with a telephony interface to interface with the public switch telephone network and a web interface providing an interface to a wide area network receives messages of a plurality of type via these interfaces. The messages are stored in a file server and provided by the server node to a user node executing a web browser. The server node provides message conversion so that a user at the user node can retrieve messages of the different media types, respond to those messages, forward messages, and send messages of different message types across a plurality of media originating from

the user node over the wide area network.

Brief Summary Text (9):

Each user has metadata associated with the user which includes information on user preferences, as well as a listing of messages currently existing for the user. The metadata is stored in a database and message listings are served to the user upon request. The metadata, and correspondingly, the message list, is updated with the arrival of each new message. Incoming phone sourced calls are answered by a telephony system that converts incoming analog, e.g. voice signals, into one or more digital formats. Among the digital formats used are wave format, VOX format, and audio streaming format. These versions of the received message are stored as message bodies in a file server or a streaming server, as the case may be, to permit them to be rapidly sent to a user responsive to a request. Facsimile messages are similarly received by the telephony interface and stored in TIFF format in a file server. The system provides on the fly conversion from TIFF to GIF based on user preference or merely serves the TIFF file to the user.

Detailed Description Text (20):

A method and apparatus to provide unified messaging between multiple media types over a network, such as the Internet, is described. In the following detailed description of the present invention, numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be apparent to one skilled in the art that the present invention may be practiced without these specific details. In other instances, well-known structures and devices are shown in block diagram form, rather than in detail, in order to avoid obscuring the present invention.

Detailed Description Text (28):

Web system 112 also includes an e-mail composer which is another thin clients. The e-mail composer includes HTML documents, forms, and CGI scripts which collectively implement, through a conventional HTML browser, a user interface by which a user can compose an e-mail message. For example, the user can specify one or more recipient e-mail addresses, one or more carbon-copy e-mail addresses, a textual subject, a textual body, one or more files to be attached, and a level of priority. In addition, all e-mail addresses can be specified by reference to address book entries for the user composing the message. Such address book entries are retrieved from database system 110 and displayed for the user by e-mail composer for selection using conventional graphical user interface techniques. When an e-mail message is completely composed, the user directs that the message be sent. E-mail composer converts the data specified by the user into the form of an e-mail message suitable for processing according to the simple mail transport protocol (SMTP). E-mail composer forwards the converted e-mail message to an outgoing mail server. The outgoing e-mail server forwards the e-mail message to mail system 114 which processes the message in a manner described more completely below.

Detailed Description Text (35):

The telephony servers place outside calls, e.g., calls to recipients outside messaging system 100, outgoing telephone lines to PSTN 160. Telephony system 108 includes outgoing fax servers which send previously stored fax mail messages to external fax telephone numbers through PSTN 160. Telephony system 108 may also include outgoing page servers which send page messages through PSTN 150 in generally the same conventional manner a person would, e.g. by dialing a pager access telephone number and providing a DTMF message to be displayed on the recipient's pager. Telephony system 108 includes outgoing voicemail servers which send previously stored voicemail messages by dialing a telephone number and playing the previously stored voicemail message. Thus, the message will be heard by a recipient or stored in the remote voicemail messaging system. In one embodiment, the system first identifies if the target phone number is on a compatible voicemail system, and if it is, it forwards the message directly into the voicemail box of the target system without dialing the number.

Detailed Description Text (39):

At functional block 406, server node 10 retrieves metadata for the subject user from local database 202. Such metadata includes an outgoing message which is, in one illustrative example, an audio signal directing the caller to leave a voice message for the subject user. Server node 10 plays the outgoing message to the caller through PSTN 12 at functional block 408. At functional block 410, server node 10 records an audio message for the subject user as received through PSTN 12. Server node 10 stores the message digitally, e.g., as a digitized audio signal in the known, conventional VOX format, in database 30 at functional block 412. In addition, server node 10 updates the metadata 36 stored in the database 30 such that the received message is included in a list of new messages for the subject user. To accomplish this update, the server node 10 acquires information about the message at functional block 420. Such information may include time and date the message was received, the phone number of the sender either obtained through caller ID or because the voicemail gives the option for the sender to provide a return number, and a size of the message left. Within the context of a voicemail, size may be in time. At functional block 422, a pointer to the location of the message body in the database 36 is gotten. At functional block 424, a user modifiable field (UMF) is associated with the available information and the pointer to the message body. At functional block 426, the server node creates a message list element, including the available information, a pointer, the UMF, and a status of the message. "Status" as used herein refers to whether the message has been reviewed previously or not, thus, status might be "new" or "not new." The message list element is added to the metadata at functional block 428. At functional block 430, the updated metadata, including the message list element, is stored in the database 30. At functional block 432, the server node 10 via the telephony system 108 pages a target user, if appropriate, based on the user's metadata.

Detailed Description Text (49):

FIG. 3b is a logic flow diagram of retrieval of fax mail messages through a network in one embodiment of the invention. Functional blocks 902-906 represent functions performed in the same manner as those described with reference to FIG. 2a at functional blocks 602-608. At functional block 912, server node 10 receives user commands directing display of one or more fax mail message bodies. At functional block 914, server node 10 retrieves those fax mail message bodies. Based on user selection, the server node either forwards the fax message body as TIFF or converts it on the server side to graphical image format (GIF) which can be displayed by nearly all personal computers and other likely user nodes without specialized software. This conversion may be done "on the fly" after the user requests the message body be sent. The server node 10 then sends the retrieved (and possibly converted) fax message body(ies) through web 14 for display on the user node 20. Thus, the user is able to view the substantive content of fax mail messages at the user node 20 without a fax machine, fax modem, or any specialized software.

Detailed Description Text (56):

If the address is not a voicemail address, a determination is made at decision block 258 if the address is a fax address. Additionally, if the address is a phone number with no designation as either fax or voicemail, default (where the message to be forwarded is an e-mail) is to a fax address. If the address is fax address or defaults to fax, the e-mail message is converted to tag image file format (TIFF) and the attachments in graphic image format (GIF) will similarly be converted to TIFF. Other printable attachments will also be converted to TIFF. This may be accomplished by sending such attachment to a standard fax driver that is commercially available. Any images already in TIFF will merely be concatenated with the converted portion of the message. Any audio attachments will be lost in the conversion. If the address is not a fax address at decision block 258 it is implicitly an e-mail address since only three message types are supported in this embodiment. If the forward address is an e-mail and the message is an e-mail, it is presumed to be in an appropriate format (e.g. SMTP) for forwarding. Once the

message or portion of the message is in suitable form for the outgoing media type specified by the address, the message is forwarded to the address at functional block 264.

Detailed Description Text (72):

FIG. 12 is a compose template responsive to actuation of the forward button in FIG. 11. The fax called "cover sheet" in FIG. 11 is pre-attached. By entering addresses in the To field (both an e-mail address and a phone number with no designation are present) and a voicemail address in the cc field, a message will be sent to each of an e-mail, a fax and a voicemail. The undesignated telephone number defaults to fax since the forwarded attachment is a fax. Conversely, if the forwarded attachment were a voicemail, the forward would go twice to voicemail (because the default address would be voicemail) and once to e-mail since the system default to the forwarded message type where ambiguity exists. Responsive to the actuation of the "send" soft button, the server node sends the message to the specified addresses. FIG. 13 is a confirmation template returned by the server node to indicate that the message has been successfully sent.

CLAIMS:

8. A method comprising:

receiving a request over a network from a user node to send a first message having an e-mail message type to a target address that is a phone number;

determining if the phone number is a voicemail address or a facsimile address;

defaulting to the facsimile address if the determination is unsuccessful; and

converting, on a server side, the first message to a second message compatible with the target address.

9. The method of claim 8 wherein the phone number is a facsimile address, further comprising:

converting the e-mail to Tagged Image File Format ("TIFF"); and

converting any text attachment to TIFF.

10. The method of claim 8 wherein the phone number is a voicemail address, further comprising:

converting the e-mail text to speech; and

saving the converted text in an audio format.

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L37: Entry 12 of 21

File: USPT

Jun 6, 2000

DOCUMENT-IDENTIFIER: US 6072862 A

TITLE: Adaptable method and system for message delivery

Application Filing Date (1):  
19960702

Brief Summary Text (6):

In light of this prior art, Message Transfer and Routing Systems (MTRS) have been developed that attempt to integrate known message delivery systems and media conversion techniques. More particularly, U.S. Pat. No. 4,837,798 issued to Cohen et al. discloses a communication system having unified messaging.

Brief Summary Text (7):

As seen therein, messages having various media formats may be received in a mailbox. The mailbox owner may designate a particular media system for delivery of an indication that a message has been received. If desired, the mailbox owner may subsequently request that the message be transmitted to the designated media system, which may include conversion of the message from one media format to that of the designated media system. Thus, messages may be reviewed by a mailbox owner at a single point of contact.

Detailed Description Text (10):

The present invention also provides for conversion of messages from one type of media format to another. As a result, depending upon the preferred or available media, subscriber (26) may also program SCP (24) to route all messages received by mailbox (10) to subscriber (26) via voice mail system (36). In such an example, SCP (24) instructs mailbox (10) to convert non voice mail messages to voice mail before SCP (24) routes such messages to subscriber (26).

Detailed Description Text (25):

Still further, the method and system of the present invention provide total transparency of telephone numbers. That is, callers need not know the individual phone numbers of facsimile machine, voice mail, video mail, and pager of a subscriber. Instead, callers need know only a subscriber's mailbox number to call and leave any type of message.

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L37: Entry 13 of 21

File: USPT

Apr 25, 2000

DOCUMENT-IDENTIFIER: US 6055240 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Method and apparatus for message management

Application Filing Date (1):  
19970612

Brief Summary Text (8):

Even when cost is not an important factor for the user, preferred message formats can be very important. For example a user may prefer to send all messages in voice format for speed of constructing the message and to receive messages in a text format, in order that hard copies of the messages can be kept. Users with impaired vision may also require all messages to be received in voice format. Known systems for converting between message formats such as voice, E-mail and fax can be used in these situations, although they must be managed by the user and do not automatically take account of sender's and receiver's preferences.

Brief Summary Text (27):

Preferably the method further comprises the step of converting the message(s) to the determined format for sending. This simplifies operation for the user who is able to leave the system whilst it converts the messages to a cost efficient and preferred format for sending. It is also possible to carry out other operations such as web browsing using the system, whilst the system performs personal messaging services on the user's behalf.

Detailed Description Text (6):

Incorporated within the terminal 1 and/or the communications network 2 is a facility to convert between message formats, such as voice, email, fax, short message service (SMS) and web-pages. The agent 3 can make use of these facilities to automatically convert between message formats, in order to send or display messages in a preferred format. For example, the user may compose the message in a convenient format e.g. voice and then the agent automatically converts the voice format message to fax for cost efficient sending. Messages can also be stored, prior to display or being sent, either in the terminal 1 and/or at a node in the communications network 2. The agent 3 makes use of a facility for automatically sending stored messages (either on or off-line). This enables messages to be sent at cost-effective times and/or according to priority. For example, a batch of messages could be sent to reduce costs. The facility for automatically sending messages may either be located in the terminal 1 or in the communications network 2.

Detailed Description Text (7):

As shown in FIG. 2, the communications network 2 can incorporate many different types of component. In the situation that the terminal 21 is a mobile telephone, this can be linked with a base transceiver 23 as shown in FIG. 2. The base transceiver 23 is linked (via a base station 24) to a server 25 that in turn provides connections into a public telephone system 26, third party service 27, the Internet 28, a short message service 29 and other supporting telecommunications systems as necessary (not shown). This system of connections (shown in FIG. 2) in

the communications network is just one example. Other combinations and connections between components could be used. In this example, the communications network is heterogeneous in nature, which is typically the case. That is many different types of component and service provider go to make up the network. The network is also a distributed system in the sense that there is no overall control or management of the system; rather organisation is effected locally at nodes or components in the network. Other terminals are provided in the communications network 2, for example as part of the public telephone system 26 or the Internet 28.

Detailed Description Text (19):

The agent or assistant 3 then automatically converts the message to the required format and sends the message at the determined time.

Detailed Description Text (24):

Once the agent or assistant 3 has assimilated the information it determines an appropriate format for displaying a message and a convenient time for downloading the message from the server 25 if required. The agent or assistant 3 then automatically converts the message to the required display format and displays the message at a convenient time. The agent or assistant 3 also uses information about the urgency of the messages in order to prioritise them.

Detailed Description Text (32):

As already described the message management system has a facility for converting between different message formats. It is also possible for the message management system to redirect messages to another terminal 21. For example a message that has been converted to a text format may be automatically redirected to a printer.

Detailed Description Text (33):

A range of applications are within the scope of the invention. These include situations in which it is required to manage messages that are sent or received by an entity in a communications network. For example, for managing messages sent or received by a mobile telephone handset which has a facility for converting between different message formats.

Detailed Description Text (52):

Cohen et al describes a unified messaging system but does not mention the use of autonomous agents that are arranged to negotiate with one another as specified in amended claim 1. A "User agent" is mentioned at column 5 line 4 but this does not carry out negotiations.

CLAIMS:

4. The method as claimed in claim 1 which further comprises the step of converting the user message to the determined format for sending.

17. The terminal as claimed in claim 15 which further comprises a converter, arranged to convert the message to the determined format for sending.

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L37: Entry 16 of 21

File: USPT

Sep 14, 1999

DOCUMENT-IDENTIFIER: US 5951638 A  
TITLE: Integrated multimedia messaging system

Application Filing Date (1):  
19970321

Brief Summary Text (4):

Most professionals have several communication channels by which others can contact them when they are not physically present to receive the contact. These channels have traditionally included voice mail, facsimile transmission, and text-based electronic mail or e-mail. In addition, paging systems are commonly used as they provide convenient messaging to mobile workers. With the advent of video technology, video messages are becoming more popular as a channel of communication as well. These communications channels give associates, customers, or other message senders relatively easy access to the message receiver. They allow teams to work together while enabling closer contact with customers. Communications and messaging are the core mechanisms used by most organizations, ensuring that a wide range of business functions proceed smoothly and swiftly.

Brief Summary Text (10):

One solution presently used for managing the various voice mail and e-mail message formats is typically called "unified messaging". Unified messaging systems differ in how tightly, or loosely, they join e-mail and voice-mail capabilities. For example, one unified messaging approach uses a single graphical user interface display to access both a voice mailbox and a separate e-mail mailbox. While such a system does allow the user to operate both the voice mail system and the e-mail system from a single location, this loosely coupled solution does not support access when the user is away from the location. Another problem with this type of system is that it does not provide a coordinated method of presenting, creating, managing, and filing messages, so it does little to combat the clutter of incoming information.

Brief Summary Text (11):

Another unified messaging technique consolidates both voice-mail and e-mail into one mailbox, an approach that generally requires an extensive investment in new equipment. For example, such a system might require adding voice messaging capabilities to e-mail server hardware. In addition to the high cost of new equipment, this approach frequently requires network redesign, produces a significant increase in administrative burden, and mandates user retraining. Basically, this amount of change results in a loss of existing investments in messaging equipment.

CLAIMS:

9. A system according to claim 7 further comprising a first workstation connected to the network including a message program for accessing the first server and retrieving messages stored therein, and further comprising a presenting mechanism for presenting first format messages and a conversion mechanism for converting second format messages to first format messages so that the first station can